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WATER SUPPLY OUTLOOK

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE, and MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report

MAY 1, 1963

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

REPORTS

CALIFORNIA ---

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

PUBLISHED BY SOIL CONSERVATION SERVICE

	PUBLISHED BY SUIL	CONSERVATION SERVICE	
REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEBMAY)	PORTLANO, OREGON	ALL COOPERATORS
STATES			
ALASKA	_ MONTHLY (MAR MAY)	PALMER, ALASKA	ALASKA S.C.D.
AR I ZONA	SEMI-MONTHLY (JAN.15 - APR.1)		SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
Colorado ano New Mexico	MONTHLY (FEBMAY)	FORT COLLINS, COLORAGO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
Гоано	_ MONTHLY (JANJUNE)	BOISE, TOAHO	TOAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JANJUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVA 0 A	MONTHLY (JANMAY)		NEVAGA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
ORE GON -	_ (anul		OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	_ MONTHLY (JANJUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON-	_ MONTHLY (FEB JUNE)_	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	_ MONTHLY (FEBJUNE)	. CASPER, WYOMING	WYOMING STATE ENGINEER
	PUBLISHED BY	OTHER AGENCIES	

1 S S U E D

BRITISH COLUMBIA ______ MONTHLY (FEB. - JUNE) ___

AGENCY

 WATER RIGHTS BR., DEPT. OF LANDS, FORESTS AND NATURAL RESOURCES, PARLIAMENT BLOG., VICTORIA,

B.C., CANADA

MONTHLY (FEB.-MAY) _____ CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388,

SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared By

P. E. Farnes Acting Snow Survey Supervisor

Soil Conservation Service Snow Survey Section Box 855, Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson
Director
Montana Agricultural
Experiment Station
Bozeman, Montana



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MONTANA WATER SUPPLY OUTLOOK May 1, 1963

The snow pack at higher elevations was increased during April by cool temperatures that delayed snow melt and by precipitation during the past month.

Snow surveys made near the first of May indicate the mountain snow pack is near or above average on most drainages East of the divide and generally below average West of the divide. The snow pack in the Jefferson River drainage is 155 percent of last year and 109 percent average. In the Madison drainage it is 117 percent of last year and 108 percent average. The Gallatin River drainage has a snow pack that is 111 percent of a year ago and 106 percent average. On tributaries to the main stem of the Missouri above Great Falls, the snow pack is 156 percent of last year and 111 percent average. In the Sun, Marias and Milk River drainages the pack is 83 percent of last year and 72 percent average. The Upper Yellowstone River drainage snow pack is 136 percent of last year and 111 percent average.

West of the divide the upper reaches of the Clark Fork drainage, including the Blackfoot, has a mountain snow cover that is 113 percent of last year and 115 percent average.



The Lower Clark Fork drainage snow pack is 80 percent of last year and 79 percent average. The Flathead River headwaters are covered with a snow pack that is 83 percent of last year and 75 percent average. The Bitterroot drainage has 94 percent of last year and 83 percent average snow pack. In the Kootenai drainage, snow cover in Montana and Canada is 92 percent of last year and 72 percent average.

May through September streamflow from the headwaters of the Missouri River is forecast to be 20 to 30 percent below average on the Madison and Jefferson Rivers, and 5 percent below average on the Gallatin River. Some late season shortage is still expected in the Red Rock drainage.

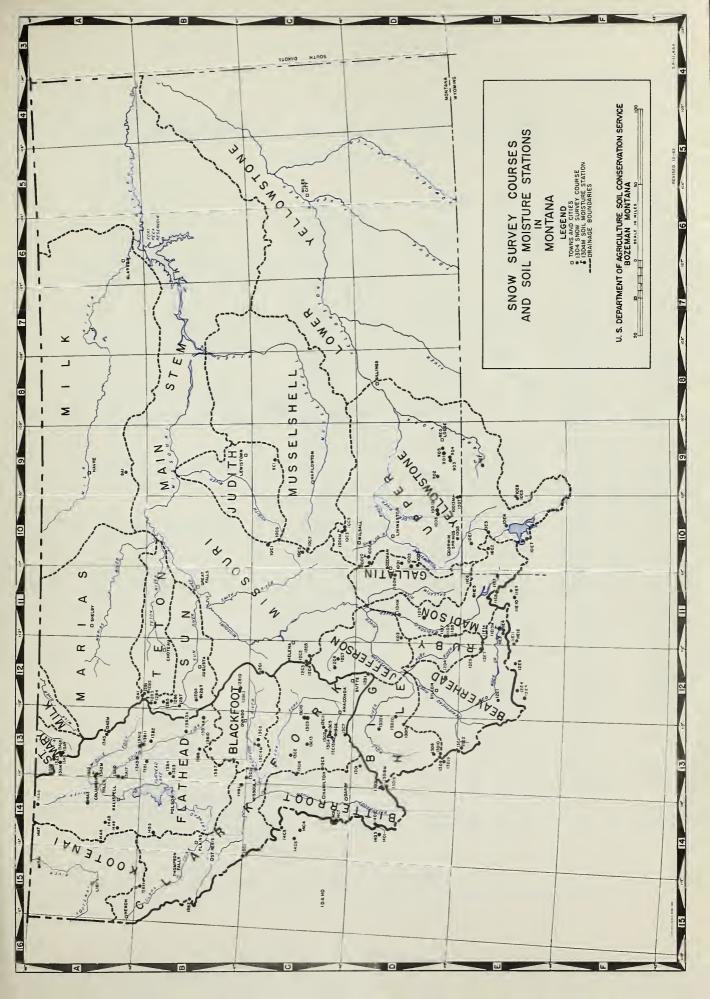
In the Yellowstone River drainage, streamflow is forecast to be 10 to 25 percent below average.

West of the divide, streamflow in the headwaters area of the Clark Fork is expected to be about 15 percent below average, dropping to 25 percent below average near the Idaho border. Tributaries of the Flathead River are forecast at 75 to 90 percent flow. In the Bitterroot drainage, some shortage of late season irrigation water may be expected. Streamflow is forecast to be 65 to 70 percent average.

Storage in irrigation reservoirs is generally slightly below to near average.

Storage in power reservoirs is generally above average.





INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

INDEX	TO	HONTANA	SNOW	COURSES	AND	SOIL	MOISTURE	STATIONS
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### COVERNA INVESTMENT NUMBER Bares Creek	Drainaga Basin & Course Name	Manber	Elev.	Location Sec. Lat.	Two.	Range Long.	Record Began	Messuring Datas	Measured By 3
Repert Create 1941 5500 4 258 308 1997 4,5.54 2 1978 128				COLUMBIA	RIVER BASI	<u>CM</u>			
Beain Freek									
Bearin Fords 1881 5000 11 298 27 1960 2,14,5 1,5 Bearin Fords 1893 6790 7 228 162 1941 3,4,5 6 1,5 Big Creek 1993 6790 7 228 162 1941 3,4,5 6 1,5 Big Creek 1993 6790 7 228 162 1941 3,4,5 6 1,5 Big Creek 1993 6790 7 228 162 1941 3,4,5 6 1,5 Big Creek 1994 610 610 7 200 28 162 1941 3,4,5 6 1,5 Bratty Greek 1994 610 610 7 200 28 162 1941 3,4,5 6 1,5 Bratty Greek 1994 610 610 7 200 28 162 1941 1942 1942 1942 1942 1942 1942 194	Srush Creek Red Mountain	14A4 15A1	5000 6000	13	30N 36N	26W 29W	1937 1937	4,5, 52 3,4,5 3,4,5,5 2 ,6 3,4,5,5 <u>2</u> ,6	1,2 1,2 1,2
Beason Lab Sign 1.0 1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0	FLATHEAD RIVER								
Copyright 1180 1240 12 188 194 194 1,4,1,4,1,4,1,1 1 1 1 1 1 1 1 1 1	Baseo Feak Sig Greek Casp Misery Desert Mcuntain French Misery Griffin Greek Divide Hell Rooring Divide Hollwood Hollwoo	1483 1383 13817 1382 1384 1489 1483 138138 1486 1485 13816 1381 1382 1381 1382 1381 1381 1381	5150 6750 6400 5600 5500 5150 3886 4300 5250 4000 6330 3800 6500 6500 6500 3580	11 7 30 24 4 11 35 18 14 34 34 39 3 11 23 11 19 21 14	24N 22N 28N 31N 22N 21N 32N 21N 30N 30N 30N 35N 17N 26N 25N 28N 28N 28N 28N 28N 28N 28N 28N	25% 18% 18% 19% 18% 25% 22% 22% 13% 22% 14% 14% 17% 17% 17% 15% 17% 17% 17% 17%	1960 1941 1962 1937 1962 1960 1942 1951 1934 1939 1941 1951 1948 1948 1948 1948	3,4,5 3,4,5 3,4,5 6 3,4,5,6 3,4,5,6 3,4,5,5,5,6 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5	1,5 1,5 1,2 1,5 1,5 1 6 1,2 6 1,5 1 1 1 1,2 1,2 1,2 1,2 1,2 1,2
Anthorse	Slack Pins Copper Crock Cotter Mins Cotter Mins Coyota Sill El Deredo Mine Fred Burr Pass Gold Crock Lare Nocdoo Crock Intergare Intergare For Lice Skalkaho Suncit Silda Rock Mt. Sauthor Crocs	12B10 12B11 13B10 13C9 13C11 13C10 15C1 13C4 13C8 13C12 13C3 13C2 13C3 13C2 13C5 13C7 13C6	5700 6250 4200 7800 8000 7200 6200 6450 4040 7000 7259 7100 6500 7780 6500	1 2 12 23 12 14 9 6 11 27 30 35 8 19	15N 15N 18N 8N 6N 14N 5N 13N 6N 10N 5N 4N	9W 9W 16W 12W 12W 12W 13W 14W 13W 16W 13W 13W 13W	1962 1962 1947 1949 1957 1949 1937 1936 1951 1958 1937 1937 1936 1939 1936	1,2,3,4,5 3,4,5 3,4,5 3,4,5 2,3,4 1,2,3,4,5 3,4,5 3,4,5,5,5,6	1 1,2 1 1 1,2 4 8 1 1 1 4 4
Column Page 1302 7700 4 25 194 1934 1,2,3,6,5,5,6 1,3	BITTERROOT RIVER								
T. MAY. RIVER Icobarg Lake #3 13k3 5600 34 368 168 1922 5 3,9 1000 13k14 4900 10 358 168 1955 5 3,9 1000 13k16 1950 15 3,9 168 1922 5 3,9 168 1922 5 3,9 168 1922 5 3,9 168 1922 5 3,9 168 1922 5 3,9 168 1922 5 3,9 168 1923 168 1923 168 1923 188 168 1923 188 168 1923 188 168 1923 188 168 1924 188 18	East Fork R.S. Gibbons Pass Lost Horse Nes Perce Camp Naz Perce Pess	13D1 13D2 14C7 14D2 14D1	7100 5940 5580 6575	16 4 5 19 25	2N 2S 4N 1S 1S	17W 19W 23W 23W 24W	1937 1934 1960 1937 1937	3,4 1,2,3,4,5,5½,6 3,4,5	1 1,3 1 1
Icobarg Lake #3				SASKATCHE	WAN RIVER	BASIN			
Scomphine Lower ## 13ALA									
Bacot Dick 13010 7600 12 85 164 1948 3,4 1 1 1 1 1 1 1 1 1	Josephine Lover #9 Mount Allen #7 Fiegen Peas #6	13A14 13A7 13A6	4900 5700 5500	10 22 15	35N 35N 35N	16W 16W 16W	1955 1922 1922	5 5 5	3,9 3,9 3,9
Sloody Dick				MISSOURI	RIVER BAS	IN			
Lakeview Canyon 11E4 6930 26 145 24 1948 3,4,5 10 Lakeview Hidge 11E3 74,07 27 145 24 1948 3,4,5 10 Leably Fees 13E1 7280 9 105 157 1948 3,4 1 17411 Creek 13E2 7959 15 105 157 1948 3,4 1 17411 Creek 13E2 7959 15 105 157 1948 3,4 1 1 White Fine Ridge 12E1 8850 18 145 94 1948 3,4,5 1 White Fine Ridge 12E1 8850 18 145 94 1948 3,4,5 1 1 Cover Headow 12E7 7900 14 12E8 44 1963 3,4,5 1 Divide 12E7 7900 18 18 44 1963 3,4,5 1 Noteh 12E7 7900 18 18 44 1963 3,4,5 1 Noteh 12E7 7900 18 18 44 1963 3,4,5 1 ENGLOSE RIVER Abundance Lake 1300 8800 7 35 124 1963 3,4,5 1 Derkborne Lake 1300 8800 7 35 124 1963 3,4,5 1 ENGLOSE RIVER Abundance Lake 1300 8800 7 35 124 1953 3,4,5 1 ENGLOSE RIVER 13015 8000 15 45 124 1955 3,4,5 1 ENGLOSE RIVER 13015 8000 15 45 124 1955 3,4,5 1 Poolben 13012 8500 14 15 134 1963 3,4,5 1 Jenkhak Creek 1308 7340 25 78 164 1948 3,4 1									
Clover Meedow 11D8 8600 28 99 74 1963 3,4,5 1 Divide 12E7 7900 14 129 4W 1963 3,4,5 1 Noteh 12E7 8500 18 15 4W 1963 3,4,5 1 BIG HOLE RIVER Abundanca Lake 13020 8800 7 35 174 1963 3,4,5 1 Elk Born Springe 13015 8000 4 85 164 1963 3,4,5 1 Elk Born Springe 13015 8000 15 45 124 1935 3,4,5 1 Elk Born Springe 13015 8000 15 45 124 1935 3,4,5 3 Poolben 13021 8500 14 15 13W 1963 3,4,5 1 Jehnka Creek 1308 7340 25 78 16W 1948 3,4 1 IEITEGON RIVER	Lekeviev Canyon Lekeviov Ridge Lonhi Pees Trail Creek	12D4 13D9 11E4 11E3 13E1 13E2	7400 8100 6930 7400 7480 7090	11 26 27 9	8S 8S 14S 14S 10S	7W 16W 2W 2W 15W 15W	1963 1948 1948 1948 1948	3,4 3,4,5 3,4,5 3,4 3,4	1 10 10 10
Divide 12E7 7900 14 12S	RUBY RIVER								
Abundance Lake 13D20 8800 7 38 124 1963 3,4,5 1 Derkhorne Lake 13D19 8800 7 38 164 1963 3,4,5 1 Derkhorne Lake 13D19 8800 14 88 164 1963 3,4,5 1 Derkhorne Lake 13D19 8800 15 18 164 1963 3,4,5 1 Derkhorne Lake 13D19 800 15 18 18 164 1963 3,4,5 1 Jahnka Craek 13D18 7340 25 78 164 1948 3,4 1 FEFTERON RIVER	Divida	12E7	7900	14	123	414	1963	3,4,5 3,4,5 3,4,5	1
Elk Berm Springe 13015 8000 15 45 124 1935 3,4,5 3 Foolben 13124 8500 14 15 134 1963 3,4,5 1 Jehnka Creek 1308 7340 25 78 164 1948 3,4 1 LEFFERON RIVER	BIG HOLE RIVER								
Person Mendago 3202 2200 32 6V 6V 3062 27 3	Derkhorse Lake Elk Sorn Springe Foolben	13D19 13D15 13D21	8600 8000 8500	15 14	4S 1S	16W 12W 13W	1963 1935 1963	3,4,5 3,4,5 3,4,5 3,4,5 3,4	1 3 1
	Berry Meadow	1207 1206 1201	6500	10	5N	6W	1941	3,4 2,3,4 1,2,3,4,5	4

4/Missouri River Basi	n contld								
AV FILESOWN A TRAVEL DESIGN	a cone-u		Location						
Dreinage Besin & Course Name	Number	Elev.	Sec.	Dec.	Range Long.	Record Began	Mesouring Dates		Measured By 2
MADISON RIVER									
Call Road Crockett Lake Hebgen Dam Jack Creek North Mesdow West Tellowstone	11D7 11D6 11E5 11D5 11D3 11E7	8050 8400 6550 6800 7500 6700	21 20 22 13 23 34	85 85 115 65 35 135	2W 3E 1E 3W 5W	1962 1962 1934 1961 1961 1934	3,4,5 3,4,5 1,2,3,4,5 3,4 3,4 1,2,3,4,5		1 3 1 1 3
GALLATIN RIVER									
Devil's Slide Hood Mesdow New World Twenty-One Mile	10D4 10D3 10D1 11E6	8100 6600 6700 7150	14 22 24 1	58 48 38 118	6E 6E 6E 5E	1935 1935 1939 1934	2,3,4,5, 2,3,4,5 2,3,4 1,2,3,4,5	6	1 1 2 3
MISSOURI RIVER MAIN S	TEM								
Cheesman Reservoir Crystal Lake Elk Peak Greashopper Kings Hill Rocky Boy Stample Peas Ten Mile Creek L. Tan Mile Creek U.	1205 901 1007 1002 1001 9A1 1201 1202 1203 1204	6200 6100 8000 7000 7500 5200 6900 6250 6800 8000	2 19 10 19 35 15 16 13 13	8N 12N 8N 9N 13N 28N 13N 8N 8N	5W 18E 8E 8E 7E 16E 7W 6W 6W	1936 1941 1963 1938 1934 1941 1934 1935 1934	1,2,3,4,5 3,4 3,4 3,4,5 3,4,5 1,2,3,4,5 1,2,3,4,5 1,2,3,4,5		3 1 1 3 7 3 3 3
SUN-TETON-MARIAS RIVE	RS								
Banchmark Cabin Creek Five-Bull Freight Creek Gates Park Goet Mountain Waldron Creek West Fork Wrong Creek Wrong Hidge	12B8 12B6 12B9 12A1 12B5 12B7 12B2 12B1 12B4 12B3	5500 5400 5600 6000 5300 7000 5600 6000 5700 6800	9 33 36 13 31 20 16 6 32	20N 23N 20N 26N 24N 22N 25N 25N 25N 25N	10W 10W 10W 10W 10W 9W 9W 10W 10W	1948 1949 1948 1948 1949 1934 1948 1948 1949	3,4 3,4 3,4 3,4 3,4,5 3,4 3,4 3,4		1 1 1 3 1 1 1 1 1 1 1 1
JUDITH RIVER									
Spur Perk	1006	8000	20	12N	9E	1963	3,4		1
UPPER YELLOWSTONE RIN	ER								
Bald Ridge Casp Senis Cooke City Crevice Mt. Gertrude Lake Grizzly Peak Independence Monusent Peak Porcupine R.S. Timborline Creek Sacajaves West Rosebud	1005 901 1007 1005 903 905 1006 10012 1003 904 10010 902	7500 7890 7400 8400 9250 B400 8000 9000 6500 8850 6550 7500	11 2 25 22 10 26 22 22 22 10 10 36	4N 85 95 95 85 75 75 4N 85 211 75	10E 18E 14E 9E 18E 19E 12E 12E 10E 18E 6E 16E	1961 1937 1937 1935 1961 1961 1961 1961 1938 1961 1960	3,4 3,4,5 1,2,3,4,5 3,4,5 1,2,3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5 3,4,5		1 1 1 1 1 1 1 4
			COLUMBIA	RIVER BAS	IN				
FLATHEAD RIVER									
Desert Mountain Maries Pess	13AZH 13A5M	5600 5250	24 34	31.N MOE	19W 14W	1956 1950	Monthly Monthly		1
CLARK FORK RIVER	100101	6450	6			1962			1
Georgetown Lake Lubrecht Forest BITTERROOT RIVER	13015H 13014M	4100	11	5N 13N	13W 15W	1961	Monthly Monthly		8
Gibbons Pasa	130184	7100	4	28	19W	1962	Monthly		1
			MISSOURI	RIVER BAS	IN				
BEAVERHEAD RIVER									
Lakeview MADISON RIVER	11E13H	6700	23	1.4.5	214	1962	Monthly		10
Red Sluff	11D4M	4800	7	3s	1E	1961	Monthly		7
GALLATIN RIVER									
College Site	11D2M	4856	18	2S	5E	1956	Honthly		1
YELLOWSTONE RIVER									
Battle Ridge Northeast Entranca Shielda River	10D11M 10D13M 10C4M	6020 7350 5850	32 33 3	2N 9S 4N	7E 14E 10E	1960 1962 1960	Monthly Monthly Monthly		1 6 1

V Numberela 1,2,3,4,5,5 $\frac{1}{2}$,6 refer to Jenuary 1, February 1, March 1, April 1, May 1, May 15 and June 1.

^{2/} Numerels refer to Agency that ascures the anow survey as follows:

^{1.} Soil Conservation Sarvice 6. National Park Service 2. U. S. Forest Service 7. Monteme Experiment Station 3. U. S. Geological Durvey 8. Montane Experiment Station 4. Montane Four Company 9. Dominion Nater & Four Bureau 5. U. S. Irlân Service 10. U. S. Flah and Wildliffs Service

M - Seil Moisture A - Aeriel Merker

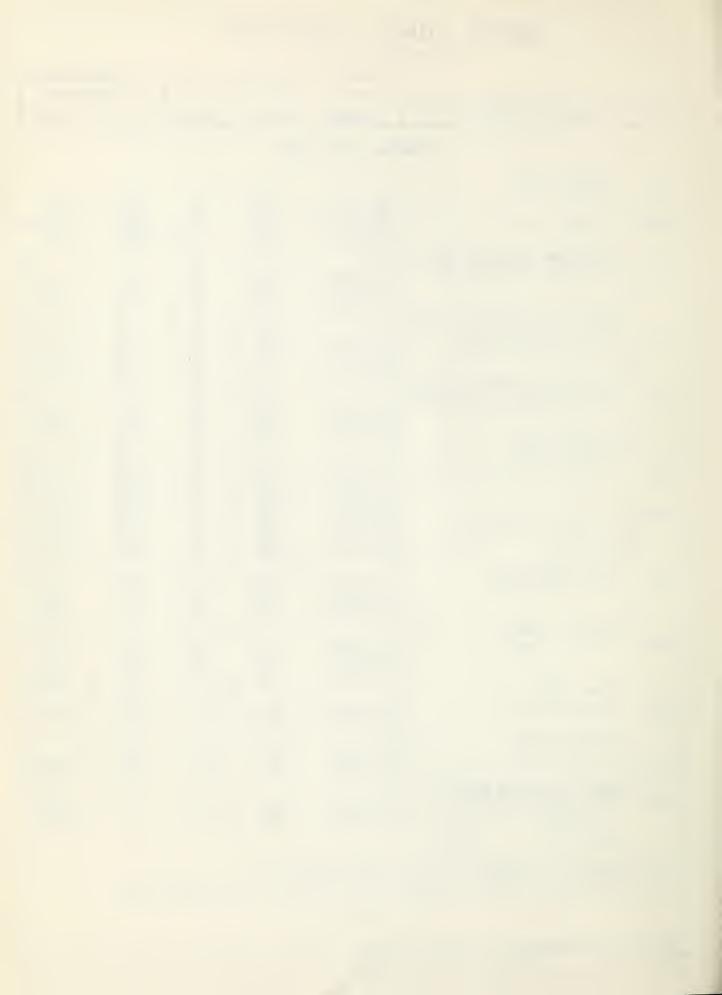
	AS OF	MAI 1, 1905			(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	COLU	MBIA RIVER B	ASIN			
	KOOTENAI RIVER					
3030	Libby (at)	May-Sept	4900	70	5799	7053
		May-July	4100	68	4874	6024
3050	Leonia (at)	May-Sept	5460	68	6531	7994
		May-July	4600	67	5529	6903
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	May-Sept	1250	72	1393	1749
		May-July	1135	72	1255	1576
		May-June	938	72	1072	1298
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	May-Sept	1318	78	1415	1687
		May-July	1210	78	1296	1553
		May-June	1027	79	1116	1286
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (nr)(17)	May-Sept	1750	87	1997	2015
		May-July	1652	87	1891	1897
		May-June	1401	87	1664	1617
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	May-Sept	4431	79	4975	5608
		May-July	4127	80	4576	5155
		May-June	3440	80	3954	4302
3720	Polson (near)(18)	May-Sept	5220	79	5795	6605
		May-July	4850	80	5336	6081
		May-June	4035	80	4602	5039
	SWAN RIVER		,			, ,
3700	Big Fork (near)	May-Sept	507	91	616	554
		May-July	436	91	537	479
		May-June	340	91	433	374
	BLACKFOOT RIVER	•			,,,,	3
3400	Bonner (near)	May-Sept	772	88	914	879
		May-July	687	88	816	783
		May-June	566	88	701	655
	FLINT CREEK	•	_		, -	
3295	Maxville (at)	May-Sept	35.0	91	32.0	38.7
		May-July	25.0	91	20.6	27.6
	BOULDER CREEK		·			
3300	Maxville (at)	May-Sept	22.2	84	22.6	26.4
		May-July	20.1	84	20.5	24.0
	MIDDLE FORK ROCK CREEK		· - • -			~~,0
3320	Philipsburg (near)	May-Sept	65.4	87		75.6
	• • • • • • • • • • • • • • • • • • • •	May-July	58.9	87		67.6
				·		

⁽¹⁷⁾ Corrected for storage in Hungry Horse Reservoir.

⁽¹⁸⁾ Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

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PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY



	70 01 12				(1000	Acre Feet)
	1	FORECAST	FORECAST	PERCENT	MEASURE	FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	CLARK FORK RIVER		~ d.o	4.0	(00	(00
3404	Milltown (above)(14)	May-Sept	583	83	622	698
		May-July	500	83	520	600
		May-June	410	83	442	492
3405	Missoula (above)	May-Sept	1355	86	1536	1577
		May-July	1187	86	1336	1383
		May-June	976	85	1143	1147
3530	Missoula (below)	May-Sept	2244	76	2748	2950
		May-July	2017	76	2450	2648
		May-June	1671	76	2110	2200
3545	St. Regis (at)	May-Sept	2892	73	3613	3948
		May-July	2581	73	3210	3540
		May-June	2160	73	2762	2950
3890	Plains (near)(18)	May-Sept	8360	77	9829	10837
		May-July	7594	77	8902	9816
		May-June	6294	77	7647	8125
3920	Whitehorse Rapids (at)(19)	May-Sept	9280	77	10803	12144
		May-July	8378	77	9723	10975
		May-June	6970	77	8325	9027
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	May-Sept	115	75	132	153
		May-July	106	75	120	141
	BITTERROOT RIVER					
3440	Darby (near)	May-Sept	365	70	452	519
		May-July	336	70	415	479
		May-June	287	70	363	409
3528	Missoula (near)(16)	May-Sept	889	65	1212	1379
		May-July	830	65	1114	1272
		May-June	695	65	967	1066
	BLODGETT CREEK	v		·		
3475	Corvallis (near)	May-Sept	38.0	91		41.9
		May-July	35.9	91		39.6

⁽¹⁴⁾ Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner. (15) Corrected for storage in Painted Rocks Reservoir.

⁽¹⁶⁾ Difference in observed flow, Clark Fork above and below Missoula.

⁽¹⁸⁾ Corrected for storage in Hungry Horse Reservoir and Flathead Lake.

⁽¹⁹⁾ Corrected for storage in Hungry Horse, Flathead Lake and Noxon Reservoirs.



	A3 01 1	IAI 1, 1909			(1000 /	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVER AGE	LAST YEAR*	AVERAGE
	MISSO	URI RIVER BA	ASIN			
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	May-Sept	30.6	56	68.5	54.5
		May-July	27.3	56	59.5	48.7
0125	Monida (near)(1)	May-Sept	33.1	53	70.8	62.3
	DIG WOLD DIVID	May-July	30.9	53	62.4	58.1
0055	BIG HOLE RIVER		~~~	A.		
0255	Melrose (near)	May-Sept	570 503	85	549	668
	BOULDER RIVER	May-July	521	85	497	611
0330	Boulder (near)	May-Sept	63.8	92	55.6	69.4
٥٥٥٥	bodider (hear)	May-July	61.6	92	51.9	66.0
	JEFFERSON RIVER	May-oury	01.0	70	21.7	00.0
0345	Sappington (at)	May-Sept	709	78	782	913
	T. P. L. C.	May-July	622	78	658	798
	MADISON RIVER			, -	-7-	1,70
0375	West Yellowstone (near)	May-Sept	144	77	196	187
		May-July	105	77	144	136
0385	Grayling (near)(2)	May-Sept	275	71	420	389
0.17.0		May-July	212	71	310	298
0410	McAllister (near)(3)	May-Sept	496	75	710	659
	CALLAMENT DETEND	May-July	388	75	557	516
0435	GALLATIN RIVER	W 0 +	107	0.4	***	. 07
0435	Gateway (near)	May-Sept	407	94	523	431
	HYALITE CREEK	May-July	342	93	443	367
0500	Hyalite R. S. (at)(4)	May-Sept	35.5	107	34.9	33.2
0,00	11,02100 100 00 (20)(4)	May-July	30.2	107	28.8	28.2
	GALLATIN RIVER	ray vary	20.2	107	20.0	20.2
0525	Logan (at)	May-Sept	380	89	518	426
		May-July	318	89	426	356

⁽¹⁾ Corrected for storage in Lima Reservoir.

⁽²⁾ Corrected for storage in Hebgen Lake.
(3) Corrected for storage in Hebgen and Ennis Lakes.
(4) Corrected for storage in Middle Creek Reservoir.



					(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	D FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	MISSCURI RIVER	v 0 1	25/1	77.0	1007	2006
0545	Toston (at)(3)	May-Sept	1564	78 78	1924 1582	1693
0000	7 . 7	May-July	1324		2888	3098
0908	Fort Benton (at)(5)	May-Sept	2306	74	2323	2575
3.00 =	77. 22 (+)(/)	May-July	1910	74	3158	3799
1095	Virgelle (at)(6)	May-Sept	2690	71	2586	3209
3350		May-July	2285	71 71	3631	
1150	Zortman (near)(6)	May-Sept	2960	71 71	2998	4140
1 220	D D (b. 3) (7)	May-July	2480	67	2998	3477
1320	Fort Peck Dam (below)(7)	May-Sept	2708	67		4027 3446
3 000	II 36 D. int () (7)	May-July	2314		1 207	
1770	Wolf Point (near)(7)	May-Sept	2840	67	4297	4256
2200	172772-+ N D ()(d)	May-July	2430	67 76	3767	3647
3300	Williston, N. D. (nr)(8)	May-Sept	8050	76	11564	10565
	DDIOWIN DEAD ODERW	May-July	6870	75	10024	9144
0/15	PRICKLY PEAR CREEK)/ O+	100	d O	20.1	20.7
0615	Clancy (near)	May-Sept	17.0	82	20.1	20.7
	NODELL FORK CINI DINER	May-July	14.5	82	17.1	17.6
0705	NORTH FORK SUN RIVER	W 0t	3.00	nn	201	225
0785	Augusta (near)	May-Sept	173	77	201	225
	CITAL DESTRUCTION	May-July	159	77	184	207
074/	SUN RIVER	v	,,,,	F1 F	r- r- 1	~ ~ 7
0786	Gibson Dam (at)(10)	May-Sept	411	75	554	551
	MADIAG DIMED	May-July	377	75	508	501
0005	MARIAS RIVER	V C+	225	r.0	222	r da
0995	Shelby (near)	May-Sept	335	58 58	332	581
	COUMIL FORM MICCEL CURIT D	May-July	303	58	304	527
1185	SOUTH FORK MUSSELSHELL R. Martinsdale (above)	Mary Court	15 5	98	11.2	46.3
1185	Martinsdale (above)	May-Sept	45.5	•	44.3	
	MILE DITED	May-July	43.2	98	40.5	44.2
1250	MILK RIVER	Non Cont	7//	77.1	1771	105
1350	Eastern Crossing (at)	May-Sept	144	74	171	195

⁽³⁾ Corrected for storage in Hebgen and Ennis Lakes.

⁽⁵⁾ Corrected for storage in Canyon Ferry Reservoir.(6) Corrected for storage in Canyon Ferry and Tiber Reservoirs.

⁽⁷⁾ Corrected for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.

⁽⁸⁾ Corrected for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill and Boysen Reservoirs.

⁽¹⁰⁾ Corrected for storage in Gibson Reservoir and diversions.



					(1000	Acre Feet)
		FORECAST	FORECAST	PERCENT	MEASURE	FLOW
NO.	RIVER AND FORECAST POINT	PERIOD	THIS YEAR	AVERAGE	LAST YEAR*	AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	May-Sept	1480	79	2119	1888
		May-July	1228	79	1757	1557
1925	Livingston (near)	May-Sept	1676	79	2386	2136
		May-July	1378	79	1973	1747
2145	Billings (at)	May-Sept	3033	76	4218	3998
		May-July	2563	76	3494	3393
3090	Miles City (at)(12)	May-Sept	4874	79	6441	6182
		May-July	4206	79	5497	5343
3295	Sidney (near)(12)	May-Sept	5080	80	7384	6362
		May-July	4340	80	6449	5430
	SHIELDS RIVER					
1935	Clyde Park (at)	May-Sept	83.8	90	65.1	92.5
		May-July	76.7	90	56.6	84.8
	STILLWATER RIVER					
2050	Absarokee (near)(11)	May-Sept	505	85	607	594
		May-July	422	85	488	497
	CLARKS FORK RIVER					
2075	Chance (at)	May-Sept	450	76	573	590
		May-July	400	76	510	525
2085	Edgar (at)	May-Sept	466	76	625	616
		May-July	412	76	532	540
000#	ROCK CREEK					
2095	Red Lodge (near)	May-Sept	96.0	88	103	109
		May-July	73.6	88	79.1	83.6

⁽¹¹⁾ Corrected for storage in Mystic Lake.(12) Corrected for storage in Buffalo Bill and Boysen Reservoirs.



SOIL MOISTURE DATA

AS OF MAY 1, 1963

(Inches)

		(SOIL	PROFILE	CURRENT	DATA	PAST	RECORD
NO.	SOIL MOISTURE STATION NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
		COLUMBIA	RIVER	BASIN				
Flathead 13A2M 13A5M	Desert Mountain Marias Pass	5600 5250	54 54	8.4 6.5	5/2 4/28	8.9 6.2	8.9 6.1	8.3 6.0
Clark Fork 13C15M	Georgetown Lake	6450	48	8.3	5/1	4.1	8.2	-
Bitterroot 13D18M	Gibbons Pass	7100	48	7.1	5/1	7.0	-	-
		MISSOURI	RIVER	BASIN				
Beaverhead 11E13M	Lakeview	6700	48	15.3	4/30	14.4	-	-
Madison 10D4M	Red Bluff	4800	40	4.7	5/5	2.4	2.0	-
Gallatin 11D2M	College Site	4856	54	14.5	4/30	13.4	11.9	11.9
Yellowston 10D11M 10D13M 10C4M	<u>e</u> Battle Ridge Northeast Entrance Shields River	6020 7350 5850	48 48 48	15.4 9.4 17.8 <u>1</u> /	4/30 4/30 4/30	17.2 7.5 17.1	14.6	-

^{1/} Capacity and previously published revised data.



	·			-			(Inches)
				CURRENT DATA		PAST	RECORD
	SNOW COURSE		DATE OF	SMOW DEPTH	WATER CONTENT	WATER	CONTENT
NO.	NAME	ELEVATION	SURVEY		L	LAST YEAR	AVERAGE
		COLUMBIA	A RIVER B	ASIN			
KOOTENAI	RIVER						
15B11 14A4 Can 10 Can 12A Can 43 Can 33 Can 20B Can 32 Can 10B Can 10A 15A1 Can 8A Can 20A Can 41 14A7	Baree Creek Brush Creek Fernie Field Gray Creek Kicking Horse Kimberley Marble Canyon Morrissey Ridge New Fernie Red Mountain Sinclair Pass Sullivan Mine Upper Elk River Weasel Divide	5500 5000 3500 4200 5100 5400 3800 5000 6100 4100 6000 4500 5100 4400 5450	5/1 4/26 5/2 4/29 4/28 4/30 5/1 5/2 5/2 4/30 5/1 4/30 4/30 5/1	72 21 0 0 46 33 27 62 3 40 0 24 0 63	31.4 8.2 0.0 0.0 15.7 11.3 7.9 26.1 0.7 14.2 0.0 8.2 0.0 26.4	41.8 8.4 0.0 0.0 17.5 11.1 0.0 9.0 23.6 3.9 14.4 0.0 9.2 0.0 30.5	48.2* 10.5* 2.7* 0.8* 20.4* 11.8* 1.5* 13.5* - 6.7* 19.7 2.1* 11.9* 2.2* 34.7*
FLATHEAD	RIVER						
13B14A 14B3 13B3 13A17 13A2 13B4 14A9 14A3 13B13A 14A5 13A5 13B7 13B2 13A10 13B1 13A12 13B11 13A12	Basin Creek Bassoo Peak Big Creek Camp Misery Desert Mountain Fatty Creek Griffin Creek Divide Hell Roaring Divide Holbrook Logan Creek Marias Pass North Fork Jocko Spotted Bear Mountain Strawberry Lake Trinkus Lake Trout Lake Twin Creeks Upper Holland Lake	5000 5150 6750 6400 5600 5500 5150 5770 4530 4300 5250 6330 7000 6500 6500 3680 7000	4/24 4/29 5/2 4/30 5/2 5/2 5/1 4/29 4/24 4/24 4/24 4/24 4/24 5/3 5/3 4/24	0 10 108 96 25 46 12 60 0 7 25 92 21 70 87 0	0.0 3.7 47.9 40.5 9.2 18.4 4.4 25.2 0.0 2.4 9.7 39.2 7.6 27.2 33.7 0.0 0.0 28.0	0.0 5.2 49.0 44.6 12.2 18.6 5.1 28.1 0.0 2.0 14.7 48.8 7.6 34.0 43.6 3.5 0.0 37.8	1.8* - 48.4* - 13.0 - 28.7 1.2* 2.7* 15.7 44.7* 12.6* 40.0* 41.4* 8.2* 0.8* 36.8*



		AS OF MA	AY 1, 19	63			(Inches)
		- (CURRENT DATA		PAST F	RECORD
SNOW COURSE			DATE	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
1107	NAME	ELEVATION	SURVEY	VETTI .	CONTENTS	LAST YEAR	AVERAGE
CLARK FORK RIVER							
13013 13B10 13011 1501 1304 15B2 1308 13012 1303 1302 1307 1301 14B1	Black Pine Coyote Hill Fred Burr Pass Hoodoo Creek Intergaard Lookout Lubrecht Forest #6 Red Lion Skalkaho Summit Slide Rock Mountain Storm Lake Stuart Mountain T. V. Mountain	7100 4200 8000 6200 6450 5250 4040 7000 7259 7100 7780 7400 6800	4/30 5/2 4/29 4/30 4/29 5/1 4/29 4/30 5/1 4/29 4/27 4/28	37 0 74 83 25 62 0 54 63 44 48 73 47	14.4 0.0 29.8 35.5 8.1 25.2 0.0 20.2 25.0 16.6 17.3 31.4 19.4	9.0 3.2 22.6 44.5 - 30.8 0.0 13.8 24.7 13.1 11.2 30.0 17.8	- 2.1* - 46.9* - 34.0* 0.1* - 25.8* 14.0* 16.3* 30.1* 21.0*
BITTERROOT RIVER							
13C16 13D2 14C5 14C7 14D2 14D1 14C8	Ambrose Gibbons Pass Lolo Pass Lost Horse Nez Perce Camp Nez Perce Pass Twin Lakes	6475 7100 5230 5940 5580 6575 6510	4/29 5/1 4/29 4/26 5/1 5/1 4/26	33 56 45 61 24 30 88	12.9 20.0 19.6 23.8 7.8 9.6 36.6	9.0 16.2 33.7 29.8 5.6 6.8 43.7	23.0 29.7* - 8.3* 12.6



SNOW COURSE SLEVATION SAME SLEVATION SAME SAME			AS OF MA	Y 1, 196	3			(Inches)
MISSOURT RIVER BASIN				(URRENT DATA		PAST	RECORD
MISSOURI RIVER BASIN MISSOURI RIVER BASIN							WATER	CONTENT
BEAVERHEAD RIVER 11E4	NO.	NAME	ELEVATION				LAST YEAR	AVERAGE
Table Lakeview Canyon Company Company			MISSOURI	RIVER B	ASIN			
11E3	BEAVER	HEAD RIVER						
11D8	11E3	Lakeview Ridge	7400	4/26	24	7.4	•	
12E7	RUBY RI	VER						
13D20	12E7	Divide	7900	4/25	31	9.3	- - -	- - -
13D19 Darkhorse Lake 8600 4/25 74 22.5 - - 13D15 Elkhorn Springs 7800 4/29 30 8.0 5.5 8.7* 13D21 Foolhen 8500 4/25 61 17.7 - -	BIG HOI	LE RIVER						
MADISON RIVER	13D19 13D15	Darkhorse Lake Elkhorn Springs	8600 7800	4/25 4/29	74 30	22.5 8.0	- 5.5	- 8.7*
MADISON RIVER 11E9 Big Springs 6500 4/29 29 10.5 11D7 Call Road 8050 4/25 42 12.5 11D6 Crockett Lake 8400 4/25 41 13.2 11E5 Hebgen Dam 6550 4/29 15 5.1 2.4 3.9 11E10 Island Park 6315 4/29 23 8.1 10E2 Norris Basin 7500 4/29 31 10.9 5.2 6.3* 11E8 Valley View 6500 4/29 34 11.3 11E7 West Yellowstone 6700 4/29 12 4.6 5.0 5.6 GALLATIN RIVER 11D9 Bear Basin 8150 5/2 53 20.8 10D4 Devil's Slide 8100 4/27 66 25.2 25.0 23.4 10D3 Hood Meadow 6600 4/27 25 9.3 4.8 5.5 11D10 Little Park 7400 5/2 37 13.6	JEFFERS	SON RIVER						
11E9	12D1	Pipestone Pass	7200	5/1	23	6.4	1.1	3.9*
11D7	MADISON	RIVER						
11D9 Bear Basin 8150 5/2 53 20.8 - - 10D4 Devil's Slide 8100 4/27 66 25.2 25.0 23.4 10D3 Hood Meadow 6600 4/27 25 9.3 4.8 5.5 11D10 Little Park 7400 5/2 37 13.6 - -	11D7 11D6 11E5 11E10 10E2 11E8	Call Road Crockett Lake Hebgen Dam Island Park Norris Basin Valley View	8050 8400 6550 6315 7500 6500	4/25 4/25 4/29 4/29 4/29 4/29	42 41 15 23 31 34	12.5 13.2 5.1 8.1 10.9 11.3	5.2	- 6.3* -
10D4 Devil's Slide 8100 4/27 66 25.2 25.0 23.4 10D3 Hood Meadow 6600 4/27 25 9.3 4.8 5.5 11D10 Little Park 7400 5/2 37 13.6 - -	GALLATI	N RIVER						
	10D4 10D3 11D10	Devil's Slide Hood Meadow Little Park	8100 6600 7400	4/27 4/27 5/2	66 25 37	25.2 9.3 13.6	4.8	23.4 5.5



		70 01 111	1 19 170				(Inches)
		(CURRENT DATA		PAST	RECORD
	SNOW COURSE		DATE OF	SNOW DEPTH	WATER CONTENT	WATER	CONTENT
NO.	NAME	ELEVATION	SURVEY	32		LAST YEAR	AVERAGE
MISSOUR	RIVER (Main Stem)						
1205 1001 1201 1202 1203 1204	Chessman Reservoir Kings Hill Stemple Pass Tenmile, Lower Tenmile, Middle Tenmile, Upper	6200 7500 6900 6250 6800 8000	4/26 4/29 4/29 4/26 4/25 4/25	5 35 26 20 43 54	1.8 10.4 8.1 5.9 13.1 17.2	0.0 10.9 7.3 0.8 6.6 10.7	2.6 14.1* 8.7 3.6 9.0 12.7
SUN-TET	ON-MARIAS RIVERS						
12B7	Goat Mountain	7000	4/30	19	6.0	9.3	9.2*
SASKATCE	HEWAN RIVER						
13A3 13A14 13A7 13A6 13A8	Iceberg Lake #3 Josephine Lower #9 Mount Allen #7 Piegan Pass #6 Ptarmigan #8	5600 4900 5700 5500 5800	5/1 4/30 4/30 4/30 5/1	54 23 84 66 72	23.6 8.8 34.8 28.4 27.6	22.8 15.2 40.4 34.7 30.7	27.1 17.1* 47.3 38.4 37.8
UPPER Y	ELLOWSTONE RIVER						
9D1 10E3 10E6 9D3 9D5 10D6 10E4 9E1 10E1 10D12 10D7	Camp Senia Canyon East Entrance Gertrude Lake Grizzly Peak Independence Lake Camp #2 Lodgepole Lupine Creek Monument Peak Northeast Entrance (Cooke City) Sacajawea	7890 7750 7000 9250 8400 8000 7850 8200 7300 9000	4/29 5/1 4/30 4/29 5/1 4/30 4/30 5/1 4/27 4/30 4/30 5/3	39 41 22 66 63 50 22 39 24 70 22 27	11.0 14.5 7.2 16.8 21.9 17.6 5.5 11.0 8.7 25.0	8.3 15.5 0.0 16.4 25.8 15.2 9.9 7.2 6.2 26.0	12.6* 4.9* - - 8.7* 11.0* 8.6* - 6.6*
10E5 9D4	Sylvan Pass Timberline Creek	7100 8850	4/30 4/29	41 67	12.6 16.6	2.5 17.1	10.7*



RESERVOIR STORAGE DATA

AS OF APRIL 30, 1963

	AS OF	APRIL 50,		(1000 Acre Feet					
				USEABLE STORAGE					
BASIN	RESERVOIR	USEABLE CAPACITY	THIS YEAR	LAST YEAR	AVERAGE				
COLUMBIA RIVER BASIN									
Flathead	Hungry Horse Flathead Lake Camas <u>1</u> / Mission Valley <u>2</u> /	3,428.0 1,791.0 45.2 100.3	2,535.0 966.5 33.2 38.2	2,321.0 1,119.0 34.2 41.2	2,048.0** 936.0 30.6 46.8				
Clark Fork	Georgetown Lake Noxon	31.0 334.6	24.0 117.8	20.9 132.2	21.2				
Bitterroot	Como	34.9	27.8	24.0	16.5				
MISSOURI RIVER BASIN									
Beaverhead Ruby Madison	Lima Ruby Hebgen Lake	84.0 38.8 384.8	44.5 32.4 308.2	53.3 38.8 154.3	55.9 27.0** 212.1				
naurson	Ennis Lake	41.0	39.0	38.7	34.4				
Gallatin	Middle Creek	8.0	5.3	4.4	4.7**				
Missouri	Canyon Ferry	2,043.0	1,985.0	1,419.0	1,628.0**				
	Hauser & Helena	61.9	59.0	56.2	46.9				
	Lake Helena	10.4	9.4	8.4	6.1**				
	Holter Lake	81.9	59.1	74.4	57.1				
	Smith River	10.7	10.1	5.2	8.2**				
	Ackley Lake Durand	5.8 7.0	7.0	1.8 3.4	4.0 6.2				
	Martinsdale	23.1	12.4	7.6	11.4				
	Deadman's Basin	72.2	60.8	15.0	49.4**				
	Fort Peck	19,410.0	10,230.0	8,129.0	12,003.0				
Sun-Teton	Gibson	105.0	55.7	74.4	70.6				
	Willow Creek	32.3	27.8	14.2	21.1				
	Pishkun	32.0	20.8	25.6	20.7				
Marias	Lower Two Medicine	16.6		0.0	1.9				
	Four Horns	19.2	1.d. (13.7	9.0				
	Swift	30.0	18.6	24.5	27.3				
	Lake Francis Tiber	112.0 1,313.0	67.0 647.0	82.5 647.6	99.9 656.9**				
Milk	Fresno	127.2	67.5	69.4	103.0				
LITTE	Nelson	66.8	40.6	19.4	37.1				
	Lake Sherburne	66.1	40.0	-/	24.8				
Yellowstone	Mystic Lake	20.8	3.8	1.4	3.3				
	Tongue River	68.0		-	17.4				
	Cooney	27.5	21.8	15.1	14.7				

^{1/} Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.



Agencies Cooperating in Collecting Data Contained in this Bulletin

- U. S. Forest Service Region I, Missoula, Montana
- U. S. Geological Survey Helena, Montana
- U. S. Army Corps of Engineers Portland, Oregon Seattle, Washington Omaha, Nebraska Riverdale, N. D.
- U. S. Indian Irrigation Service St. Ignatius, Montana
- U. S. Weather Bureau Helena, Montana
- U. S. Fish & Wildlife Service Red Rock Lakes Refuge Monida, Montana
- U. S. Bureau of Reclamation Billings, Montana Boise, Idaho
- Montana Power Company Butte, Montana
- Agricultural Experiment Station North Montana Branch Station Havre, Montana
- State Water Conservation Board Helena, Montana

- National Park Service Yellowstone National Park Glacier National Park
- Montana Experiment Station Montana State College Bozeman, Montana
- Bonneville Power Administration Portland, Oregon
- Montana State School of Forestry Montana State University Missoula, Montana
- Soil Conservation Service Montana, Wyoming, Idaho
- Soil Conservation Districts Montana Counties
- Johnson Flying Service, Inc. Missoula, Montana
- Water Rights Branch
 Dept. of Lands & Forests
 Victoria, British Columbia
- Department of Northern Affairs & National Resources Calgary, Alberta
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